

Pacific Blue™ anti-human CD4 Antibody

Catalog# / Size	300524 / 25 µg 300521 / 100 µg
Clone	RPA-T4
Regulatory Status	RUO
Workshop	IV T114
Other Names	T4
Isotype	Mouse IgG1, κ
Description	CD4, also known as T4, is a 55 kD single-chain type I transmembrane glycoprotein expressed on most thymocytes, a subset of T cells, and monocytes/macrophages. CD4, a member of the Ig superfamily, recognizes antigens associated with MHC class II molecules, and participates in cell-cell interactions, thymic differentiation, and signal transduction. CD4 acts as a primary receptor for HIV, binding to HIV gp120. CD4 has also been shown to interact with IL-16.

Product Details

Verified Reactivity	Human
Reported Reactivity	Chimpanzee
Antibody Type	Monoclonal
Host Species	Mouse
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Preparation	The antibody was purified by affinity chromatography, and conjugated with Pacific Blue™ under optimal conditions.
Concentration	0.5 mg/ml
Storage & Handling	The CD4 antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. Do not freeze.
Application	FC - Quality tested
Recommended Usage	<p>Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. The suggested use of this reagent is ≤ 2.0 µg per 10⁶ cells in 100 µl volume or 100 µl of whole blood. It is highly recommended that the reagent be titrated for optimal performance for each application.</p> <p>* Pacific Blue™ has a maximum emission of 455 nm when it is excited at 405 nm. Prior to using Pacific Blue™ conjugate for flow cytometric analysis, please verify your flow cytometer's capability of exciting and detecting the fluorochrome.</p> <p>Alexa Fluor® and Pacific Blue™ are trademarks of Life Technologies Corporation.</p> <p>View full statement regarding label licenses</p>
Excitation Laser	Violet Laser (405 nm)
Application Notes	The RPA-T4 antibody binds to the D1 domain of CD4 (CDR1 and CDR3 epitopes) and can block HIV gp120 binding and inhibit syncytia formation. Additional reported applications (for the relevant formats) include: immunohistochemistry of acetone-fixed frozen sections ^{3,4,5} , blocking of T cell activation ^{1,2} , and spatial biology (IBEX) ^{10,11} . This clone was tested in-house and does not work on formalin fixed paraffin-embedded (FFPE) tissue. The Ultra-LEAF™ purified antibody (Endotoxin < 0.01 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for functional assays (Cat. No. 300569 - 300574).
Application References	1. Knapp W, <i>et al.</i> 1989. Leucocyte Typing IV. Oxford University Press. New York. (Activ)

(PubMed link indicates BioLegend citation)

2. Moir S, *et al.* 1999. *J. Virol.* 73:7972. (Activ)
3. Deng MC, *et al.* 1995. *Circulation* 91:1647. (IHC)
4. Friedman T, *et al.* 1999. *J. Immunol.* 162:5256. (IHC)
5. Mack CL, *et al.* 2004. *Pediatr. Res.* 56:79. (IHC)
6. Lan RY, *et al.* 2006. *Hepatology* 43:729.
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9. Stoeckius M, *et al.* 2017. *Nat. Methods.* 14:865. (PG)
10. Radtke AJ, *et al.* 2020. *Proc Natl Acad Sci USA.* 117:33455-33465. (SB) [PubMed](#)
11. Radtke AJ, *et al.* 2022. *Nat Protoc.* 17:378-401. (SB) [PubMed](#)

Product Citations

1. Hebel K, *et al.* 2014. *J Immunol.* 192:5160. [PubMed](#)
2. Bilich T, *et al.* 2021. *Cancer Discov.* 11:1982. [PubMed](#)
3. Lee YJ, *et al.* 2021. *Front Immunol.* 615369:12. [PubMed](#)
4. Reed JC, *et al.* 2020. *PLoS One.* 15:e0236921. [PubMed](#)
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7. Boland J, *et al.* 2014. *BMJ Support Palliat Care.* 4:357. [PubMed](#)
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10. Vadrevu KM, *et al.* 2022. *Sci Rep.* 12:12038. [PubMed](#)
11. Barman S, *et al.* 2016. *Int Immunol.* 28: 533 - 545. [PubMed](#)
12. Ickrath P, *et al.* 2019. *Biomed Rep.* 10:119. [PubMed](#)
13. van der Velden V, *et al.* 2017. *J Immunol Methods.* 10.1016/j.jim.2017.03.011. [PubMed](#)
14. Qin H, *et al.* 2015. *Blood.* 126: 629 - 639. [PubMed](#)
15. Jiang W, *et al.* 2014. *J Virol.* 88:5369. [PubMed](#)
16. Kølsgaard T, *et al.* 2015. *PLoS One.* 10: 0131934. [PubMed](#)
17. Pons S, *et al.* 2021. *Immun Inflamm Dis.* 9:1656. [PubMed](#)
18. Ickrath P, *et al.* 2018. *Int J Mol Med.* 42:1116. [PubMed](#)

RRID

AB_493099 (BioLegend Cat. No. 300524)
AB_493098 (BioLegend Cat. No. 300521)

Antigen Details

Structure	Ig superfamily, type I transmembrane glycoprotein, 55 kD
Distribution	T cell subset, majority of thymocytes, monocytes/macrophages
Function	MHC class II co-receptor, lymphocyte adhesion, thymic differentiation, HIV receptor
Ligand/Receptor	MHC class II molecules, HIV gp120, IL-16
Cell Type	Dendritic cells, Macrophages, Monocytes, T cells, Thymocytes, Tregs
Biology Area	Immunology
Molecular Family	CD Molecules
Antigen References	1. Center D, <i>et al.</i> 1996. <i>Immunol. Today</i> 17:476. 2. Gaubin M, <i>et al.</i> 1996. <i>Eur. J. Clin. Chem. Clin. Biochem.</i> 34:723.
Gene ID	920

Related Protocols

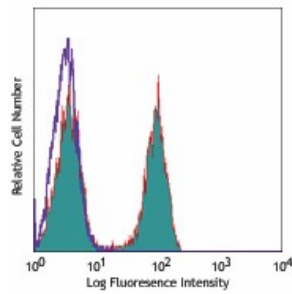
[Cell Surface Flow Cytometry Staining Protocol](#)

Other Formats

APC anti-human CD4, Biotin anti-human CD4, FITC anti-human CD4, PE anti-human CD4, PE/Cyanine5 anti-human CD4, PE/Cyanine7 anti-human CD4, Purified anti-human CD4, APC/Cyanine7 anti-human CD4, Alexa Fluor® 488 anti-human CD4, Alexa Fluor® 647 anti-human CD4, Pacific Blue™ anti-human CD4, Brilliant Violet 421™ anti-human CD4, Alexa Fluor® 700 anti-human CD4, PerCP anti-human CD4, PerCP/Cyanine5.5 anti-human CD4, Brilliant Violet 570™ anti-human CD4, Brilliant Violet 650™ anti-human CD4, Purified anti-human CD4 (Maxpar® Ready), Alexa Fluor® 594 anti-human CD4, Brilliant Violet 510™ anti-human CD4, PE/Dazzle™ 594 anti-human CD4, Brilliant Violet 785™ anti-human CD4, Brilliant Violet 605™ anti-human CD4, Brilliant Violet 711™ anti-human CD4, APC/Fire™ 750 anti-human CD4, CD4 Fluorophore Sampler Kit, CD4 Fluorophore Sampler Kit with Veri-Cells™

PBMC, TotalSeq™-A0072 anti-human CD4, TotalSeq™-B0072 anti-human CD4, TotalSeq™-C0072 anti-human CD4, Ultra-LEAF™ Purified anti-human CD4, TotalSeq™-D0072 anti-human CD4

Product Data



Human peripheral blood lymphocytes
stained with RPA-T4 Pacific Blue™

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